

Jim Herndon

Vice President

Jim Herndon is a Vice President in Nexant's Strategy & Planning (S&P) group located in the Cary, NC office. Jim currently focuses on strategic planning and program design for utility demand-side management (DSM) initiatives throughout the country. His planning and design work is informed by 19 years of experience in all facets of DSM programs including performing market assessments and portfolio planning, managing turnkey implementation, conducting technical project reviews, and delivering third-party program evaluations. In providing strategic consulting services, Jim strives to understand the client's goals and objectives and tailor the analysis to leverage industry best practices while aligning with the client's individual characteristics and needs.

Areas of Expertise

Resource Planning Support: Providing technical analysis, regulatory support, and expert witness testimony for DSM program development and integrated resource planning (IRP) activities to electric and natural gas utilities.

Energy Analysis and Market Characterization: Evaluating the technical and economic applicability of DSM measures for program development; and determining energy savings estimates and market potential for measures and program offerings in a particular region or service territory.

Portfolio Planning and Program Design: Conducting cost-effectiveness analysis and providing strategic insights to assist in the planning, design, and implementation of DSM programs.

Program Management: Ensuring compliance with energy program rules; coordinating staff workload and budgets; working directly with service providers and customers on projects; and advising contractors on savings estimates.

Representative Project Experience

Duke Energy – Market Potential Studies (2015–Present)

Jim has directed Nexant's multiple DSM market potential studies for Duke Energy's North Carolina, South Carolina, Indiana and Ohio service territories. The studies for each service territory integrated both energy efficiency and demand response opportunities across Duke Energy's residential, commercial, and industrial customer classes; and determined the technical, economic, and program potential. Nexant conducted the studies in close coordination

Education

MS, Engineering Management, Duke University, NC

BS, Civil Engineering, Duke University, NC

Work History

Nexant | Cary, NC

Vice President (2018–Present)

Principal (2014–2018)

Senior Project Manager (2009–2014)

Nexant | Atlanta, GA

Project Manager (2007–2009)

Senior Project Engineer (2005–2007)

Project Engineer (2003–2005)

Nexant | San Francisco, CA

Project Engineer (2002–2003)

IT Corporation | Andover, MA

Project Engineer (1998–2001)

with Duke Energy's IRP team, as well as program design and delivery teams, in order to provide an accurate assessment of market potential that can be directly applied to Duke Energy's current and future DSM planning efforts.

Florida Statewide Potential Study (2017-2019)

Jim led Nexant's team that was retained by Florida Power & Light on behalf of seven utilities in the state of Florida to complete technical potential studies for all seven utilities. The scope of the studies included Energy Efficiency (EE), Demand Response (DR), and Distributed Energy Resources (DER) opportunities across the residential, commercial, and industrial sectors, including interaction between these categories of DSM in order to account for overlapping impacts. In addition to the technical potential analysis, Nexant assessed economic and achievable potential for a subset of the seven utilities. Following the completion of the studies, Nexant provided regulatory support for the 2019 Florida Goals Proceeding including preparation of direct written testimony, deposition, and support for the discovery process by preparing required responses to data requests and regulatory interrogatories. Nexant also provided oral testimony during the Commission's hearing on the Goals Proceeding.

Santee Cooper – DSM Program Design and Implementation (2009–Present)

Jim provides strategic program design support activities for Santee Cooper's suite of energy efficiency programs across the residential and commercial market segments, as well as strategic program advisory services for Santee Cooper's long-term energy reduction goals. Previously, Jim managed Nexant's initial development, rollout, and management of Santee Cooper's commercial energy efficiency programs.

Columbia Gas of Virginia (CVA) – DSM Program Design and Implementation (2010–Present)

Jim is the technical lead for Nexant's program design and regulatory support services for CVA's WarmWise program offerings. Nexant's support includes portfolio planning and regulatory support for CVA's residential and commercial energy efficiency programs, as well as providing rebate processing and other support services to assist CVA in the implementation of their programs. Jim has led Nexant's portfolio planning efforts, including market characterization analysis, technical analysis of proposed programs and portfolio, development of annual program budgets and savings targets, and regulatory support of CVA's program filings with the Virginia State Corporation Commission, including providing written testimony supporting Nexant's analysis.

Virginia Natural Gas – DSM Program Design and Regulatory Support (2014–Present)

Jim currently leads Nexant's technical and regulatory support for Virginia Natural Gas's residential DSM portfolio. Support activities include: program cost-effectiveness analysis and preparation of regulatory filings, including annual status updates to the Virginia State Corporation Commission, and technical analysis and testimony for regulatory approval of program updates and modifications.

Elizabethtown Gas – DSM Program Design and Regulatory Support (2016–2018)

Jim led Nexant's technical and regulatory support for Elizabethtown Gas's development of updated DSM program offerings to their residential and commercial customers. Nexant worked collaboratively with Elizabethtown Gas to develop cost-beneficial programs for their eligible customer base. Support activities include program cost-effectiveness analysis and preparation of testimony for regulatory program filing with the New Jersey Board of Public Utilities.

Duke Energy – Program Evaluations (2014–Present)

Jim currently serves as the Project Manager for Nexant's evaluation, measurement and verification (EM&V) of three DSM program offerings. The evaluation activities include separate impact and process evaluations across Duke Energy's five service territories to assess program performance, adherence to best practices, and opportunities for program improvements. Jim provides daily project management oversight of Nexant project staff, coordination of resources, and quality control oversight of project deliverables.

Georgia Power Company – DSM Program Analysis and IRP Support (2005–2019)

Jim provided technical and regulatory support for Georgia Power Company's DSM program analysis in the residential and commercial markets for their 2007, 2010, 2013, 2016, and 2019 IRP filings. The program analysis support included comprehensive compilation and assessment of applicable DSM measures and technologies across the residential, commercial, and industrial sectors, as well as the determination of the overall market potential through four separate technical potential studies (completed in 2007, 2012, 2015 and 2018). Jim also led the portfolio planning efforts that included developing preliminary program designs, savings targets, and budgets, along with supporting cost-effectiveness analysis to determine the feasibility of individual measures and program offerings for implementation.

Dominion Virginia Power – Program Development and Regulatory Support (2014–2016)

Jim served as the program design lead and expert witness in support of Dominion Virginia Power's regulatory filing for three proposed DSM program offerings. He provided input on the delivery structure, eligibility criteria, and cost-effectiveness analysis in the development of program offerings. Additionally, Jim provided written and oral testimony on behalf of Dominion Virginia Power in support of Nexant's technical analysis on the feasibility and cost-effectiveness of the programs to the Virginia State Corporation Commission.

Los Angeles Department of Water and Power (LADWP) – Energy Efficiency Potential Study (2013–2015)

Jim managed Nexant's development of an energy efficiency potential study for the LADWP. Under his direction, Nexant quantified the energy efficiency potential for LADWP's service territory, including collection of primary data through facility auditing to determine the energy efficiency potential of facilities owned by the City of Los Angeles. The study followed industry best practices to determine the energy efficiency potential, and undertook unique approaches to aggregate and bundle measures into program delivery channels to identify all possible achievable savings. The study will inform LADWP's short-term program planning, as well as updates to their 10-year program planning targets.

Class	"Omitted Measures"	Nexant Response
Residential	LED decorative and directional lamps	<p>The study included the following six individual LED lighting measures:</p> <ul style="list-style-type: none"> • Energy Star LED, 6 W • Energy Star LED, 9 W • Energy Star LED, 13 W • Energy Star LED, 19 W • Energy Star Qualified Airtight Can Lights • Energy Star Qualified LED, Recessed Lighting <p>These measures were applied to all categories of lighting equipment in the disaggregated Duke Energy forecast, including "Screw-In Lamps" and "Lighting-Other" which would encompass decorative and directional lamps.</p>
	Pool covers	<p>This measure, per the IL TRM reference suggested by witness Grevatt, is primarily a natural gas savings measure and only includes electric savings at the regional water treatment plant from reduced need to pump water to the residential pool. As such, this recommended measure would not have an impact on the EE potential for the residential sector, and may not impact Duke Energy at all if the treatment plant is not located in Duke Energy's service territory.</p>
	CEE tier 2 refrigerators	<p>The study included the following measure:</p> <ul style="list-style-type: none"> • Energy Star Refrigerator <p>This measure represented efficient refrigerators in the Carolinas MPS. The savings percentage applied was 22% for the Carolinas (generally, Energy Star refrigerators are 20% more efficient than the Federal standards, and CEE Tier 2 refrigerators are 25% more efficient than the Federal standards).</p>
Commercial	Networked lighting controls	<p>The Lighting Energy Management System measure included in the study represents savings for centralized facility controls of lighting systems</p>
	LED parking lot lighting	<p>The LED Canopy Lighting (Exterior) measure included in the study was applied to "Exterior parking/lot lighting" equipment type within Duke Energy disaggregated load forecast.</p>
	LED directional lamps	<p>The study included the following five individual LED lighting measures:</p> <ul style="list-style-type: none"> • Energy Star LED, 9 W • Energy Star LED, 13 W • Energy Star Qualified LED Shelf-Mounted Task Lighting • Energy Star Qualified LED, Recessed Lighting • LED Display Lighting <p>These measures were applied to the "Spot lighting" equipment type within the Interior Lighting end use. These measures would encompass directional lamps.</p>
	Evaporator fan motor controls	<p>The study includes 3 measures that target savings for evaporator fan motors in commercial refrigeration systems:</p> <ul style="list-style-type: none"> • PSC to ECM Evaporator Fan Motor (Reach-In) • PSC to ECM Evaporator Fan Motor (Walk-In, Refrigerator)

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		<ul style="list-style-type: none"> SP to ECM Evaporator Fan Motor (Walk-In, Refrigerator) <p>The study assumed that replacement motors would include applicable controls.</p>
	Variable refrigerant flow (VRF)	<p>The study included the following measures for VRF systems:</p> <ul style="list-style-type: none"> Ductless Mini-Split AC, 4 Ton, 16 SEER Ductless Mini-Split HP, 4 Ton, 16 SEER, 9 HSPF
	Dedicated outdoor air system (DOAS)	<p>The study included the following HVAC system optimization measures:</p> <ul style="list-style-type: none"> Dual Entropy Economizer Advanced Rooftop Controller Energy Recovery Ventilation Systems <p>The HVAC system improvements include optimization of outside air and overlap with impacts of a DOAS.</p>
	Air-source heat pumps	<p>The study included the following measures for heat pump systems:</p> <ul style="list-style-type: none"> Packaged Terminal HP Ductless Mini-Split HP, 4 Ton, 16 SEER, 9 HSPF HE DX 5.4-11.25 Tons Elect Heat HE DX 11.25-20.0 Tons Elec Heat HE DX Less than 5.4 Tons Elect Heat
	Variable speed air compressor	<p>The study included the following comparable measure:</p> <ul style="list-style-type: none"> High Efficiency Air Compressor
	Dual enthalpy economizer for existing buildings	<p>The study included the following comparable measure:</p> <ul style="list-style-type: none"> Dual Entropy Economizer
	Data center hot/cold aisle configuration	<p>The study included the following data center HVAC measure to represent improved efficiency in the HVAC system:</p> <ul style="list-style-type: none"> High Efficiency CRAC Unit
Industrial	Strategic energy management	<p>The study included the following comparable measure:</p> <ul style="list-style-type: none"> Facility Energy Management System
	Process improvement	<p>The study included the following comparable measure:</p> <ul style="list-style-type: none"> Facility Energy Management System
	Compressed air leak survey & repair	<p>The study included the following comparable measure, which would include leak detection and repair:</p> <ul style="list-style-type: none"> Air Compressor Optimization
	Compressed air no-loss drains	<p>The study included the following comparable measure, which would include system improvements such as no-loss drains:</p> <ul style="list-style-type: none"> Air Compressor Optimization
	Chiller plant optimization	<p>The study included the following comparable measures:</p> <ul style="list-style-type: none"> Retro-commissioning Chilled water reset <p>Both measures address optimization of chilled water systems</p>
	Advanced rooftop control	<p>The study included the following comparable measures that target savings from improved HVAC controls:</p> <ul style="list-style-type: none"> Retro-commissioning Small Building Retro-commissioning Energy Recovery Ventilation System

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		<ul style="list-style-type: none">• Facility Energy Management System• Fan Thermostat Controller• Smart Thermostat• VAV System